

II. AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 (amended): A system for draining fluid from a layered soil profile, comprising:

(a) a layered soil profile comprising at least a first layer and a second layer beneath said first layer, wherein the material of said first layer is different from the material of said second layer;

(b) means for determining the particle sizes of the materials comprising said layers;

(c) means for determining the fluid retention properties of said layers based on said particle size;

(d) ~~(b) an array of fibrous capillary drains inserted at regular intervals into said soil profile~~ a plurality of elongated porous drainage members, wherein each of said drainage members further comprises a length of fiberglass having a distribution of pore sizes compatible with said particle sizes and said fluid retention properties;

(e) means for inserting said drainage members into said layered soil profile at substantially regular intervals to form an array; and

(f) ~~and wherein said fibrous capillary drains~~ drainage members traverse one of more of the extend from said first layer substantially through said second layer and provide a substantially continuous porous pathway for draining said fluid from said layered soil profile.

2 (amended): The system of claim 1, wherein said ~~layered soil profile~~ first layer further comprises a sandy root zone and said second layer further comprises a gravel layer ~~beneath said root zone, and wherein said capillary drains provide a continuous porous pathway of capillary pores extending from the lower reaches of said root zone through said gravel layer.~~

3 (amended): The system of claim 1, wherein the orientation of said ~~capillary drains~~ drainage members within said soil profile is substantially vertical.

4 (amended): The system of claim 1, wherein each ~~of said capillary drains~~ length of fiberglass further comprises at least one of length of fiberglass rope; and a length of fiberglass tape; or a contained column of sand or similar particulate matter.

5 (amended): The system of claim ~~4~~ 4, wherein said length of fiberglass rope has a diameter of about 0.64 to 2.54 cm.

6 (original): The system of claim 1, wherein said fluid is perched water retained in one or more layers of said layered soil profile.

Claims 7-11 (cancelled)

12 (amended): A method of draining fluid from a layered soil profile, comprising the steps of:

(a) removing a sample of said layered soil profile, wherein said soil profile comprises at least a first layer and a second layer beneath said first layer, and wherein the material of said first layer is different from the material of said second layer ;

(b) separating the layers of said soil profile;

(c) determining the particle sizes of the materials comprising said layers;

(d) inferring the ~~water~~ fluid retention properties of said layers from said particle size; and

(e) inserting a plurality of ~~fibrous capillary drains such that said fibrous capillary drains~~ traverse one of more of the layers of said soil profile elongated porous drainage members at substantially regular intervals into said soil profile, wherein each of said drainage members further comprises a length of fiberglass having a distribution of pore sizes compatible with said particle sizes and said fluid retention properties; and

(f) wherein said drainage members extend from said first layer substantially through said second layer and provide a substantially continuous porous pathway for draining said fluid from said layered soil profile.

13 (amended): The method of claim 12, wherein said ~~layered soil profile~~ first layer further comprises a sandy root zone and said second layer further comprises a gravel layer ~~beneath said root zone, and wherein said capillary drains provide a continuous porous pathway of capillary pores extending from the lower reaches of said root zone through said gravel layer.~~

14 (amended): The method of claim 12, wherein the orientation of said ~~capillary drains~~ drainage members within said soil profile is substantially vertical.

15 (amended): The method of claim 12, wherein each of said ~~capillary drains~~ length of fiberglass further comprises at least one of ~~length of~~ fiberglass rope; and a length of ~~length of~~ fiberglass tape, ~~or a contained column of sand or similar particulate matter.~~

16 (amended): The method of claim 15, wherein said length of fiberglass ~~rope~~ has a diameter of about 0.64 to 2.54 cm.

17 (original): The method of claim 12, wherein said fluid is perched water retained in one or more layers of said layered soil profile.

18 (amended): The method of claim 12, wherein said ~~capillary drains~~ drainage members are spaced about 24 inches (61 cm) from one another and form an array.

19 (original): The method of claim 12, wherein said soil profile is a putting green.

20 (amended): The method of claim 12, wherein said insertion of said ~~capillary drains~~ drainage members further comprises the steps of:

(a) creating ~~a~~ pilot holes in said soil profile extending from the surface of the ground to the maximum depth of ~~drain~~ insertion, ~~and~~ wherein the diameter of said pilot holes is slightly greater than the diameter of said ~~capillary drains~~ drainage members;

(b) inserting each of said ~~capillary drains~~ drainage members into said pilot holes by attaching a material different than and of greater stiffness than the material of said ~~capillary drain~~ drainage members to each of said drainage members;

(c) withdrawing said second material from said pilot hole; and

(d) ~~(e)~~ backfilling said pilot hole with the soil of said soil profile.

21 (new): The system of claim 1, wherein said soil profile is a putting green.

22 (new): The system of claim 1, wherein the drainage members are spaced about 24 inches (61 cm) from one another.